

Applicant : Brandon A. Bartling
Serial No. : 10/743,585
Filed : December 22, 2003
Art Unit: 1745
Examiner: Gregg Cantelmo

REMARKS

Claims 1, 8, 15, 16, 18, 19, 23, 27, 29 and 32 have been amended, claims 17 has been cancelled, and claims 33-38 have been added. Claims 1-3, 5, 6, 8-16, 18-20, 22-24, 26-29 and 31-38 are now present in the application. Reconsideration of the application as amended is respectfully requested.

Claims 1 and 29 has been amended to add the unit "N/m" after the lower bounds of the loss stiffness range, and claims 8 and 29 have been amended to add the unit "volts" after the lower bounds of the open circuit voltage range.

Claims 1, 19, 23 and 29 have been amended to recite that the tab system further comprises a second polymer layer and a second adhesive layer between the first polymer layer and the second polymer layer and that the first polymer layer and the second polymer layer are both biaxially oriented. Support can be found in original claims 13, 17, 18, 27, 28 and 32.

Claims 15, 16 and 27 have been amended to clarify that the adhesive layer referred to is the first adhesive layer.

Claim 18 has been amended to depend from new claim 33 rather than deleted claim 17 and to delete features recited in claim 33.

Claim 28 has been amended to delete portions that are no longer necessary with the above amendment of claim 23.

Claim 32 has been amended to delete features incorporated into claim 29.

Claims 33 and 34 have been added, depending from claim 1, and reciting that the second polymer layer comprises polypropylene, and that both the first and second polymer layers comprise polypropylene, respectively. Support is found in original claims 12, 18, 27, 28 and 32. Similarly, new claim 37, which depends from claim 19, recites that both the first and second polymer layers comprise polypropylene.

New claims 35, 36 and 38 recite that the second adhesive comprises an acrylic adhesive. Support is found on page 13, lines 8-13 of the original specification.

In the Office action dated October 10, 2007, the Examiner indicated that the request for continued examination filed on August 2, 2007, has been entered, together with the arguments and affidavits submitted on July 17, 2007. The previous prior art rejections were withdrawn, but

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the claimed subject matter was not deemed to be allowable based on new grounds of rejection. The Examiner also clarified that the 35 USC § 112, 2nd paragraph rejection of claims 3, 20 and 24 have been overcome and were withdrawn in the previous Office action. The Examiner objected to claims 1, 8 and 29 because of informalities. Claims 1-3, 6-10, 12, 14-17, 19-20, 22-24, 26, 29 and 31 were rejected under 35 USC § 103(a) as obvious over Oltman et al. in view of WO 01/91224. Claims 18 and 27-28 were rejected under 35 USC § 103(a) as obvious over Oltman et al. in view of WO '224. Claim 11 was rejected under 35 USC § 103(a) as unpatentable over either Oltman in view of WO'224 and further in view of US Woodruff, or Shrim. Claim 32 was objected to as being dependent upon a rejected base claim, but was found to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant believes that the objections and rejections have been overcome by the above amendments, as explained below.

Claims 1, 8 and 29 were objected to because the lower bounds of the ranges for loss stiffness and open circuit voltage did not include the units of N/m and volts, respectively. These claims have been amended as required.

Claims 1-3, 6-10, 12, 14-17, 19-20, 22-24, 26, 29 and 31 were rejected as obvious over Oltman et al. in view of WO '224. In summary, the Examiner reasoned that, though Oltman et al. do not disclose the claimed properties of the tab system of the invention (loss stiffness, oxygen permeability, peel strength and burst pressure), Oltman's paper/adhesive combination appears to be substantially identical to at least some of those exemplified in the present application, so there is a reasonable expectation that the prior art paper of Oltman exhibits the same properties. The Examiner therefore characterized the differences between the invention and the Oltman reference as being that Oltman et al. do not teach a cell having zero added mercury or an active material comprising zinc and an electrolyte comprising KOH, which were as identified as features of zinc-air cells disclosed in WO '224. The Examiner concluded that it would have been obvious to modify the teachings of Oltman by selecting the additional features disclosed in WO '224 to arrive at the claimed invention and that it would also have been obvious to modify the teachings of Oltman by designing the cell to have zero added mercury because of hazards and increased governmental requirements regarding mercury in electrochemical cells.

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Applicant submitted a declaration with the paper filed on July 16, 2007, containing evidence that the tab system disclosed by Oltman et al. does not exhibit the claimed properties. This declaration was not found to be persuasive because it did not make a direct comparison of the claimed invention and the tab system disclosed by Oltman et al. and the comparisons were not commensurate with the scope of the claims. Applicant believes that, although a direct comparison was not made, the declaration provided sufficient evidence to show that the claimed tab system properties are not inherent in the tab system disclosed by Oltman et al. While independent claims 1, 19, 23 and 29 have been amended above to overcome the rejections relying on the Oltman reference, Applicant reserves the right to pursue broader protection in a continuing application.


The Examiner found claim 32 to contain allowable subject matter. Claims 1, 19, 23 and 29 have been amended to add features found in original claim 32: a second polymer layer, biaxial orientation of both the first and second polymer layers and an adhesive between the first and second polymer layers. As acknowledged by the Examiner, Oltman et al teaches a 3-ply biaxially oriented polypropylene layer with only a single adhesive layer (between the biaxially oriented polypropylene paper and the exterior surface of the metal-air cell), and though Farnworth (US 6,329,095) discloses a tab system having first and second polymer layers and an adhesive between the polymer layers, the polymer layers are not biaxially oriented polypropylene.

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Applicants believe that the application is now in condition for allowance. Withdrawal of the objections and rejections and allowance of claims 1-3, 5, 6, 8-16, 18-20, 22-24, 26-29 and 31-38 is requested.

Respectfully submitted,

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